SHARES

The SHAred RESources (SHARES) High Frequency (HF) Radio Program provides a single, interagency emergency message handling system by bringing together existing HF radio resources of Federal, state and industry organizations when normal communications are destroyed or unavailable for the transmission of information supporting national security and emergency preparedness (NS/EP). SHARES is one of a number of initiatives sponsored by the National Communications System (NCS) in its role of planning and preparing for NS/EP. SHARES is available on a 24-hour basis to support intra- or interagency mission requirements. Use of the flagword "SHARES" is all that is needed to get the critically important information through.

Y2K Operations Report

The months leading up to Y2K rollover were busy ones for HF radio. Organizations which routinely rely on HF radio to support day-to-day operations increased the emphasis placed on performance of their HF systems. Organizations which rely on HF radios as a backup capability to be used only in the event of failure of primary communications took steps to ensure their HF systems were ready, that their operators were trained, and that HF radio was made a part of Y2K contingency plans. Even organizations without HF resources prior to Y2K took

Y2K Operations Confirmation Card

action to ensure that HF was available. After all the preparation, Y2K came and went without significant impact. Although HF radio operations were not called upon during Y2K, the flurry of activity provided a valuable opportunity to become better prepared for emergencies by improving the readiness of HF systems.

This was the situation with SHARES. Participation increased in the months leading up to Y2K. Federal, state and industry organizations began including SHARES in their emergency planning documents for the first time. Network operations during Y2K buildup provided an opportunity for station personnel to improve their on-air skills and expand their knowledge of SHARES procedures. The Y2K after-action operations report shows this:

The SHARES Coordination Network (SCN) began Level 2 operations at 0800 EST, December 26, 1999. On-air activities began at 0700 EST, December 30, 1999, and continued uninterrupted until 1500 EST, January 3, 2000. During the five-day operation, 1155 Station Availability Reports were received from stations located in all fifty states, Puerto Rico, Cuba, and Canada. A total of 312 SHARES stations representing 36 Federal, state, and industry organizations participated. Multiple STAR units submitted reports. SHARES message traffic was limited to station availability and operational status reports. The operation marked the first time the National Telecommunications Coordinating Network High Frequency Radio, the GSA NCS Regional Managers High Frequency Radio Network, and SHARES participated jointly in an on-air operation.

Although no operational SHARES traffic was reported, SHARES demonstrated its readiness and capability to support all-hazard situations. All personnel who participated are to be commended.

NATIONAL COMMUNICATIONS SYSTEM
OFFICE OF THE MANAGER
701 SOUTH COURTHOUSE ROAD
ARLINGTON, VIRGINIA 22204-2198

MEMORANDUM FOR SHARES PROGRAM PARTICIPANTS   April 5, 2000

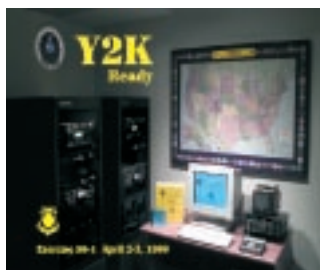SUBJECT: SHARES Participation and Y2K Rollover

1. Since last summer, the U. S. Forces Command, Beltsville Information Management Center, the WV Emergency Operations Center, USMC Ground Defense Security Force Guantanamo Bay Cuba, and the WA Emergency Operations Center, have contributed resources to the SHARES HF Radio Program. The 2000 edition of NCSH 3-3-1, SHARES Directory, scheduled for publication in May, will list over 1050 stations, representing 76 organizations, located in all fifty states and at 14 locations in 5 countries overseas. What began a decade ago as an initiative by a few Federal organizations to establish an interoperable emergency message handling system to support national security and emergency preparedness (NS/EP) using HF radio as its primary media has grown convincingly strong.

2. The expanding interest in SHARES over the years has paralleled the emphasis placed on HF radio in general to support contingency communications requirements. This emphasis was evident in the build-up to Y2K. Organizations at all levels of government and industry, from Capital Hill to the giant telecommunications providers, took the initiative to ensure that HF was made part of their emergency planning. Older equipment and systems were dusted off and put on-line. Many were upgraded to meet newer interoperability requirements, and to take advantage of the major advancements in HF radio technology. Orders for new systems kept manufacturers busy up until the eleventh hour.

3. Along with the attention being given to the hardware and software components, planners were also making sure that the radios and systems were technically and procedurally interoperable with other organization's resources. The Y2K support activity marked the first time, for example, that SHARES, the National Telecommunications Coordinating HF Network (NTCN-HF), and the NCS Regional Managers HF Radio Network (RM-HF) joined forces procedurally to expand their overall HF radio capability. Additionally, SHARES was imbedded in many of the member's continuity of operations plans as an adjunct to organizational HF capability and in some cases as the primary back-up communications capability supporting Y2K planning.

4. Although the potential hazard of Y2K rollover has run its course, future unknown hazards requiring emergency communications are a certainty. For those organizations which improved the readiness of their HF radio systems in preparation for Y2K, or which added HF radio systems as an emergency communications capability, and who joined SHARES in preparation for the rollover, we look forward to your continued participation in SHARES multi-agency emergency and readiness activities.

CAPT Lynne M. Hicks, USN
Chairman
SHARES HF Interoperability Working Group

SHARES Confirmation Cards Issued

The SHARES HF Interoperability Working Group issued four SHARES Confirmation Cards during 1999. Cards were issued to stations which participated in the following SHARES support activity: Exercise 99-1, Exercise 99-2, Hurricanes Bret and Floyd, and Exercise 99-3. Pictures used on the 4x6-inch cards are selected to represent the operation supported or some aspect of the SHARES program. An after-action summary of the event, a list by call sign of the stations which supported the activity and some aspect of the SHARES Outreach Program are also included on the cards. The SHARES Confirmation Card (SHARES Form 5) is used along with the SHARES Certificate of

007 - Exercise 99-1   008 - Exercise 99-2   009 - Hurricanes Bret and Floyd   010 - Exercise 99-3

Appreciation and Certificate of Participation to acknowledge station participation in a SHARES operation. The cards are issued only to those stations which participate in the activity and the agency Points of Contact. All SHARES participants received a copy of Confirmation Card 001, SHARES Program Participation, issued in August 1998. Eleven Cards have been issued to date.

Ms. Diann L. McCoy has became the ninth Deputy Manager of the National Communications System (NCS) since the organization was established in 1963. As the new chief officer for the NCS, Ms. McCoy is responsible for ensuring that the NCS assists the President and the Executive Office of the President in exercising wartime and non-wartime emergency telecommunications, and in coordinating the planning for and provisioning of national security and emergency preparedness communications for the Federal government. Among the programs which support this effort is the SHARES HF Radio Program. Prior to coming to the NCS, Ms. McCoy served as Deputy Director, C4I Program Integration Directorate, Defense Information Systems Agency (DISA), Arlington, VA.

The SHARES Outreach Program continues to expand awareness of the NCS and SHARES throughout the emergency response community, and demonstrate the capabilities of HF radio in supporting national security and emergency preparedness (NS/EP). Most recently, the new SHARES exhibit was on display during the AFCEA West Conference and Exposition held on February 10-11, 2000, in San Diego, CA. The SHARES HF Interoperability Working Group (IWG) will also host the exhibit during AFCEA's TechNet International 2000 to be held on June 20-22,2000, at the Washington, DC, Convention Center. To include an upcoming activity in the SHARES Outreach Program, contact your SHARES IWG representative or the SHARES IWG Chairman at **shares@ncs.gov**.

C. Reynard Storey (SCS Southwest), Ken Carpenter (SPO), and Wilbur Goll (SCS Central) at AFCEA West

Geomagnetic Storms

The 11-year geomagnetic storm cycle is again at its peak and will continue at varying high levels through 2003. NOAA is reporting that 1 to 4 extremely strong storm events and 3 to 60 severe storm events are expected to occur during this storm cycle. Although HF radio is one of the most enduring communications against this solar phenomenon, and, in fact, benefits from the increased ionization of the upper atmosphere, it is by no means exempt from the storm's effects. What causes these storms, and how can SHARES help during this critical period?

Geomagnetic storms occur when huge solar flares erupt, accompanied by the ejection into space of large clouds of ionized gas. These plasma clouds, or coronal mass ejections, cause disturbances to the earth's magnetic field, which disrupt vital public services. Power grids are particularly susceptible. The grids attract geomagnetically induced currents (GIC) created by the storms. Even short duration GIC impulse can cause the collapse of regional power grids. The North American Electric Reliability Council attributed more than 200 significant events to a solar storm that lasted only 90 seconds in 1989.

SHARES vigilance increases during periods of heightened solar activity. The number of SHARES stations, their diverse locations, and their access to over 200 frequencies, help ensure that SHARES will be available when needed during the upcoming storm cycle.

Solar storm predictions can be found at www.sec.noaa.gov.

Electronic Administration

Beginning January 1, 2000, SHARES Exercise Notices and SHARES Coordination Network (SCN) Operational Level Change Notices will be distributed only by electronic means. The notices will be distributed using e-mail and will be posted on the SHARES BBS (SCN Channels 9-10) and included on the SHARES home page (www.ncs.gov/~shares/shares). Emphasis on electronic processing to support SHARES administration began in January 1998. Since that time, the SHARES Workbook, to include the SHARES Users Manual and Directory, has been available on CD ROM. Electronic distribution of the SHARES Directory alone has saved over a half-million pieces of paper annually. Significant savings were also realized in processing and production time. Send e-mail addresses and changes to 'shares@ncs.gov' or to the Project Office at 'hfmail@shareshf.com'.

DVA Rep Fulk Retires

Ms. B. Jean Fulk, the Department of Veterans Affairs (DVA) representative to SHARES for the past 12 years, retired after 32 years of Federal service. As one of the original SHARES HF Interoperability Working Group members, Jean has been instrumental in all aspects of program development. Jean also has the distinction of having sent the first SHARES message following Hurricane Hugo in 1991 from the DVA Emergency Operations Center in Martinsburg, WV, to a communications-isolated DVA hospital in Puerto Rico. She was also instrumental in getting the Secretary of Veterans Affairs together with the Manager, NCS, for a photo-op to commemorate the affair. In a note to the IWG Chairman at her retirement, Jean commented: *"...the Department of Veterans Affairs has been able to take full advantage of SHARES. Our funding is targeted to care for the nation's Veterans; however, we are tasked under ESF-8 to support the Public Health Service upon activation of the Federal Response Plan. SHARES has served us to the fullest extent over the years. Our Area Managers know to use SHARES if a need arises. SHARES gives the 171 DVA hospitals a contingency communications plan. The SHARES Project Office has provided outstanding support to the DVA and other members of the IWG, and I wish SHARES continued success. Good luck to you all."* SHARES members everywhere wish Jean the best of luck too in the future years, and say, "Thanks for a job well done."

Station Spotlight

The mission of the Defense Logistics Agency (DLA) is to provide supplies and services to America's military forces worldwide. To ensure that a communications link between key DLA facilities is maintained during emergencies, DLA relies upon HF radio. Ten DLA sites participate in SHARES; one site, located in Bremerton, WA, also serves as Coordination Station Northwest.

The Bremerton facility, also known in DLA and SHARES by call sign DLA303, operates during normal duty hours. Staffed by four seasoned radio operators, Alan Murdock, Ron Cammers, Lee Smith, and Jeff Siniscalchi, DLA303's HF capabilities include voice, ALE and digital modes supporting the SHARES BBS.

A long-standing member of SHARES, DLA303 volunteered to serve as SHARES Coordination Station Northwest in 1999. In this capacity, DLA303 assists during check-ins, and helps coordinate the processing of SHARES message traffic.

As chief operator for DLA303, Mr. Murdock views SHARES as providing security during an emergency by providing state-of-the-art HF radio capability made available by SHARES members. He also expects SHARES influence to grow and for SHARES to continue to play an important role in emergency preparedness.

Alan Murdock (top) & Jeff Siniscalchi at DLA303

On-Air Protocol

Standard operating procedures are the key to quick and efficient response to emergencies. This is particularly true when dealing with a large user network like the SHARES Coordination Network (SCN), comprised of many different organizations and operator skills. Here are a few procedures recommended by the members:

- Use only your SHARES registered call sign.
- Wait for an SCS to call for check-ins before transmitting.
- Check-in by giving only your call sign and state.
- Be sure the frequency is clear before keying the mike.
- Don't give reason for repeats unless specifically requested.
- End every transmission with "OVER" (reply requested), or "OUT" (no reply requested).
- Unless requested to do so, don't use double calls or double personal identifications.
- Acknowledge calls. Silence in response to a transmission disrupts communications.
- Use "BREAK, BREAK" only for emergency messages.
- Shift to a working frequency for extended conversations.
- Moderate speed. ACCURACY FIRST, SPEED SECOND.

The key to using these procedures is practice. Improve the readiness of your station and SHARES by participating in the weekly SCN check-ins, periodic nationwide SHARES exercises, and other on-air activities.

State HF Operations

Since the first state Emergency Operations Center (EOC) joined the SHARES program in 1994 under the sponsorship of FEMA, a total of 28 states have elected to participate. Most of the state EOCs use HF radio equipment provided by FEMA and earmarked to support Federal continuity of operations programs. Some of the states have expanded their use of HF and have configured their HF systems to support multiple networks to provide contingency communications within the state. Mr. Henry (Hank) Black, Assistant Director for Communications, Maryland Emergency Management Agency, reports that Maryland has recently expanded its HF radio operations, and has established multiple HF user-oriented networks linking state, civil and military organizations. The networks have also been configured to interface with other media used by Maryland emergency operations personnel.
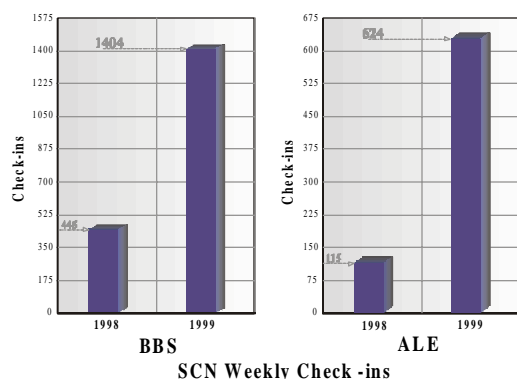
SHARES Home Page

The SHARES home page is being reformatted to improve transportabiltiy between the 22 pages currently found on the site. No changes to site material are planned. The current web site, **www.ncs.gov/~shares/shares.htm,** was established in March 1993. The site has been modified over the years to serve as a means to disseminate current operational information and situation reports to SHARES station personnel. Revisions to the home page are expected to be completed by this summer.

Readiness and Operations

The most critical times for emergency response personnel is the first 12 hours after an emergency occurs. This is also the time when communications are most in demand, and the time when communications are most limited. Because of the unique characteristics of HF radio, those first 12 hours are also the time when HF radio can contribute the most. It is for this reason that a large part of SHARES readiness is based on its ability to respond quickly and efficiently at the outset of an emergency.

Quick and efficient response means determining which SHARES stations located within the disaster area are on-the-air and available to support the operation, and which SHARES stations around the country are available to provide relay support or message processing support to local emergency response personnel. Quick and efficient response also means getting this information to the emergency response personnel who are in need of a communications link, and to the SHARES stations supporting the operation. To ensure that SHARES is ready during the critical first hours of an emergency, considerable emphasis is placed on the timely submission and processing of Station Availability Reports. Two-hour check-in

SHARES
Coordination
Stations

windows are conducted each Wednesday from 1600Z to 1800Z to provide stations an opportunity to practice checking-in with a SHARES Coordination Stations and submitting a Station Availability Report. Along with the weekly on-air activities, the three nationwide SHARES exercises conducted each year include the requirement for each participant to submit a Station Availability Report.

SCN Weekly Check -ins

SHARES readiness continues to improve with the increased participation in these on-air activities. The number of stations participating in the weekly check-ins during 1999 increased by 1,570 over the previous year (from 5,246 to 6,816 stations). A total of 632 stations participated in the exercises during 1999. The efficiency of the check-in process has also improved with the increased use of ALE and the SHARES BBS. Use of ALE for Link Quality Analysis has tripled since 1998; use of the SHARES BBS to submit Station Availability Reports and pass SHARES messages increased from 449 in 1998 to 1404 during 1999. SHARES stations are encouraged to continue to take advantage of scheduled on-air operational activities, and to practice submitting the Station Availability Report to further improve both station proficiency and SHARES readiness.

SHARES Supports AT&T During Exercise

SHARES Transportable Auxiliary Radio (STAR) units assigned to the NCC, AT&T, MARS, NDER, and USFORSCOM were on hand in Atlanta, GA, October 24-27, 1999, to participate in AT&T's Network Disaster Recovery Exercise. The STAR units provided regional and national communications support during the annual exercise designed to simulate destruction of a major switching facility. Within an hour of the start of the exercise, STAR personnel had established radio communications from the exercise site to the SHARES Coordination Network, where 186 SHARES stations located in 45 states were on-the-air to support exercise activities. Joe Zeibel, AT&T's HF coordinator for the exercise, cited the outstanding capability of SHARES to establish a critical communications link within minutes of the call for assistance. He commented that, during emergencies, phone circuits quickly become overloaded. SHARES is structured to provide emergency communications during the critical first hours of an emergency, and to provide continued support until action is taken to restore or reconstitute normal day-to-day communications services.